

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action mailed February 27, 2007 rejected claims 1-30. This is a full and timely response to that outstanding Office Action. Upon entry of the amendments in this response, claims 1-5, 8-16, 18-20, and 23-30 are pending. More specifically, claims 1, 4, 5, 12, 13, 16, 19, 20, and 27-29 are amended and claims 6, 7, 17, 21, and 22 are canceled. Claims 6, 7, 17, 21, and 22 are canceled without prejudice, waiver, or disclaimer. Applicant takes this action merely to reduce the number of issues and to facilitate early allowance and issuance of the present application. Applicant reserves the right to pursue the subject matter of these canceled claims in a continuing application, if Applicant so chooses, and does not intend to dedicate any of the canceled subject matter to the public. These amendments are specifically described hereinafter.

I. Present Status of Patent Application

Claims 1-9, 12-24, and 27-30 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). Claims 10-11 and 25-26 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058) in further view of *Ikegami* (U.S. Patent No. 6,393,032). To the extent that these rejections have not been rendered moot by the cancellation of claims, they are respectfully traversed.

II. Examiner Interview

Applicant first wishes to express sincere appreciation for the time that Examiner Afshar spent with Applicant's representative Benjie Balser during a May 15, 2007 telephone discussion regarding the above-identified Office Action. During the interview, various features described in the patent application and recited in the independent claims, including redundant acknowledgements, and *Cimini* were discussed, and that the outcome of this discussion is addressed herein. Applicants believe that the amendments presented herein are consistent with the suggestions and/or overall discussion with Examiner Afshar. Thus, Applicant respectfully requests that Examiner Afshar carefully consider this amendment and response.

III. **Rejections Under 35 U.S.C. §103(a)**

A. **Claims 1-4**

The Office Action rejects claims 1-4 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). For at least the reasons set forth below, Applicant respectfully traverses the rejections.

Independent claim 1, as amended, recites:

1. A multiple channel modulation method comprising:
receiving a first portion of a data block on a first shared-communications channel;
receiving a second portion of said data block on a second shared-communications channel;
transmitting a first acknowledgment frame into said second shared-communications channel, wherein said first acknowledgment frame indicates receipt of said first portion and said second portion of said data block; and

transmitting a duplicate first acknowledgment frame into said first shared-communications channel, wherein said duplicate first acknowledgment frame indicates receipt of said first portion and said second portion of said data block.

(Emphasis added).

Applicant respectfully submits that the amendments to claim 1 have rendered the rejection moot. Further, Applicant respectfully submits that claim 1 patently defines over the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue. *See, e.g., In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

Applicant respectfully submits that independent claim 1 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least ***transmitting a duplicate first acknowledgment frame into said first shared-communications channel, wherein said duplicate first acknowledgment frame indicates receipt of said first portion and said second portion of said data block.*** Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose transmitting a duplicate first acknowledgment frame into said first shared-communications channel, wherein said duplicate first acknowledgment frame indicates receipt of said first portion and said second portion of said data block. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 1, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 1 is allowable over the cited references of record, dependent claims 2-4 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-4 contain all the features of independent claim 1. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002); *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection to claims 2-4 should be withdrawn and the claims allowed.

B. Claims 5 and 8-11

The Office Action rejects claims 5 and 8-9 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). The Office Action rejects claims 10 and 11 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058) in further view of *Ikegami* (U.S. Patent No. 6,393,032). For at least the reasons set forth below, Applicant respectfully traverses the rejections.

Independent claim 5, as amended, recites:

5. A multiple channel modulation method comprising:
 - transmitting a first portion of a data block into a first shared-communications channel;
 - transmitting a second portion of said data block into a second shared-communications channel;
 - receiving a first acknowledgment frame on said second shared-communications channel, wherein said first acknowledgment frame

indicates receipt of said first portion and said second portion of said data block; and

receiving a second acknowledgment frame duplicative of the first acknowledgement frame on said first shared-communications channel, wherein said second acknowledgment frame indicates receipt of said first portion and said second portion of said data block.

(Emphasis added).

Applicant respectfully submits that the amendments to claim 5 have rendered the rejection moot. Further, Applicant respectfully submits that claim 5 patently defines over the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue.

Applicant respectfully submits that independent claim 5 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least **receiving a second acknowledgment frame duplicative of the first acknowledgement frame on said first shared-communications channel, wherein said second acknowledgment frame indicates receipt of said first portion and said second portion of said data block.** Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose receiving a second acknowledgment frame duplicative of the first acknowledgement frame on said first shared-communications channel, wherein said second acknowledgment frame indicates receipt of said first portion and said second portion of said data block. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose,

teach, or suggest, either implicitly or explicitly, all the elements of claim 5, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 5 is allowable over the cited references of record, dependent claims 8-11 (which depend from independent claim 5) are allowable as a matter of law for at least the reason that dependent claims 8-11 contain all the features of independent claim 5. Therefore, the rejection to claims 8-11 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 10 and 11, *Ikegami* does not make up for the deficiencies of Admitted Prior Art and *Cimini* noted above. Therefore, claims 10 and 11 are considered patentable over any combination of these documents for at least the reason that claims 10 and 11 incorporate allowable features of claim 5 as set forth above.

C. Claims 12-15

The Office Action rejects claims 12-15 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). For at least the reasons set forth below, Applicant respectfully traverses the rejections.

Independent claim 12, as amended, recites:

12. A multiple channel modulation method comprising:
receiving first and second duplicative acknowledgements that indicate receipt of a first and second portion of a data block on a first shared-communications channel and a second shared-communications channel; and

transmitting a portion of said data block into at least one of (i) said first shared-communications channel and (ii) said second shared-communications channel, wherein the choice of shared-communications channel used for transmitting said portion is based on (a) the contents of said acknowledgments and (b) the shared-communications channel over which said acknowledgements were received.

(Emphasis added).

Applicant respectfully submits that the amendments to claim 12 have rendered the rejection moot. Further, Applicant respectfully submits that claim 12 patently defines over the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue.

Applicant respectfully submits that independent claim 12 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least **receiving first and second duplicative acknowledgements that indicate receipt of a first and second portion of a data block on a first shared-communications channel and a second shared-communications channel**. Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose receiving first and second duplicative acknowledgements that indicate receipt of a first and second portion of a data block on a first shared-communications channel and a second shared-communications channel. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose, teach, or suggest, either implicitly or

explicitly, all the elements of claim 12, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 12 is allowable over the cited references of record, dependent claims 13-15 (which depend from independent claim 12) are allowable as a matter of law for at least the reason that dependent claims 13-15 contain all the features of independent claim 12. Therefore, the rejection to claims 13-15 should be withdrawn and the claims allowed.

D. Claims 16 and 18-19

The Office Action rejects claims 16 and 18-19 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). For at least the reasons set forth below, Applicant respectfully traverses the rejections.

Independent claim 16, as amended, recites:

16. An apparatus in a multiple channel modulation system comprising:
- a receiver for:
 - (i) receiving a first portion of a data block on a first shared-communications channel; and
 - (ii) receiving a second portion of said data block on a second shared-communications channel; and
 - a transmitter for:
 - (i) transmitting a first acknowledgment frame into said second shared-communications channel, wherein said first acknowledgment frame indicates receipt of said first portion and said second portion of said data block; and
 - (ii) ***transmitting a duplicative second acknowledgment frame into said first shared-communications channel, wherein said second acknowledgment frame indicates***

***receipt of said first portion and said second portion of
said data block.***

(Emphasis added).

Applicant respectfully submits that the amendments to claim 16 have rendered the rejection moot. Further, Applicant respectfully submits that claim 16 patently defines over the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue.

Applicant respectfully submits that independent claim 16 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least **transmitting a duplicative second acknowledgment frame into said first shared-communications channel only, wherein said second acknowledgment frame indicates receipt of said first portion and said second portion of said data block**. Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose transmitting a duplicative second acknowledgment frame into said first shared-communications channel only, wherein said second acknowledgment frame indicates receipt of said first portion and said second portion of said data block. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 16, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 16 is allowable over the cited references of record, dependent claims 18-19 (which depend from independent claim

16) are allowable as a matter of law for at least the reason that dependent claims 18-19 contain all the features of independent claim 16. Therefore, the rejection to claims 87-19 should be withdrawn and the claims allowed.

E. Claims 20 and 23-26

The Office Action rejects claims 20 and 23-24 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). The Office Action rejects claims 25 and 26 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058) in further view of *Ikegami* (U.S. Patent No. 6,393,032). For at least the reasons set forth below, Applicant respectfully traverses the rejections.

Independent claim 20, as amended, recites:

20. An apparatus in a multiple channel modulation system comprising:
a transmitter for:
 (i) transmitting a first portion of a data block into a first shared-communications channel; and
 (ii) transmitting a second portion of said data block into a second shared-communications channel; and
a receiver for receiving a first acknowledgment frame on said second shared-communications channel, wherein said first acknowledgment frame indicates receipt of said first portion and said second portion of said data block; and
receiving a duplicative second acknowledgment frame on said first shared-communications channel, wherein said duplicative second acknowledgment frame indicates receipt of said first portion and said second portion of said data block.

(Emphasis added).

Applicant respectfully submits that the amendments to claim 20 have rendered the rejection moot. Further, Applicant respectfully submits that claim 20 patently defines over

the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue.

Applicant respectfully submits that independent claim 20 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least **receiving a duplicative second acknowledgment frame on said first shared-communications channel, wherein said duplicative second acknowledgment frame indicates receipt of said first portion and said second portion of said data block**. Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose receiving a duplicative second acknowledgment frame on said first shared-communications channel, wherein said duplicative second acknowledgment frame indicates receipt of said first portion and said second portion of said data block. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 20, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 20 is allowable over the cited references of record, dependent claims 23-26 (which depend from independent claim 20) are allowable as a matter of law for at least the reason that dependent claims 23-26 contain all the features of independent claim 20. Therefore, the rejection to claims 23-26 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 25 and 26, *Ikegami* does not make up for the deficiencies of Admitted Prior art and *Cimini* noted above. Therefore, claims 25 and 26 are considered patentable over any combination of these documents for at least the reason that claims 25 and 26 incorporate allowable features of claim 20 as set forth above.

F. Claims 27-30

The Office Action rejects claims 27-30 under 35 U.S.C. §103(a) as allegedly being unpatentable over Admitted Prior Art (APA) in view of *Cimini* (U.S. Publication No. 2003/0152058). For at least the reasons set forth below, Applicant respectfully traverses the rejections where not rendered moot by amendment.

Independent claim 27, as amended, recites:

27. An apparatus in a multiple channel modulation system comprising:
a receiver for receiving duplicative acknowledgments that indicate receipt of a first portion and a second portion of a data block on a first shared-communications channel and a second shared-communications channel; and
a transmitter for transmitting a portion of said data block into at least one of (i) said first shared-communications channel and (ii) said second shared-communications channel, wherein the choice of shared-communications channel used for transmitting said portion is based on (a) the contents of said acknowledgments and (b) the shared-communications channel over which said acknowledgements were received.

(Emphasis added).

Applicant respectfully submits that the amendments to claim 27 have rendered the rejection moot. Further, Applicant respectfully submits that claim 27 patently defines over the cited art for at least the reason that the cited art does not disclose the features

emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue.

Applicant respectfully submits that independent claim 27 is allowable for at least the reason that the combination of Admitted Prior Art and *Cimini* does not disclose, teach, or suggest at least **a receiver for receiving duplicative acknowledgments that indicate receipt of a first portion and a second portion of a data block on a first shared-communications channel and a second shared-communications channel.**

Even if, assuming for the sake of argument, *Cimini* discloses an acknowledgement signal, *Cimini* fails to disclose a receiver for receiving duplicative acknowledgments that indicate receipt of a first portion and a second portion of a data block on a first shared-communications channel and a second shared-communications channel. Additionally, Applicant does not admit that the cited element is disclosed in the prior art. As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 27, the rejection should be withdrawn for at least that reason.

For at least the reason that independent claim 27 is allowable over the cited references of record, dependent claims 28-30 (which depend from independent claim 27) are allowable as a matter of law for at least the reason that dependent claims 28-30 contain all the features of independent claim 27. Therefore, the rejection to claims 28-30 should be withdrawn and the claims allowed.

IV. Miscellaneous Issues

Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-5, 8-16, 18-20, and 23-30 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

It is believed that no extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to deposit account No. 50-0835.

Respectfully submitted,

/BAB/

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